

Tag-Team:
A Website for Crowdsourced Tagging of Archival Photos

An Honors Thesis (HONR499)

By

Erin Bretz

Thesis Advisor
Megan McNames

Ball State University
Muncie, IN

April 2015

Expected Date of Graduation

May 2015

Undergrad
Thesis
LD
2489
24
2015
.B745

Abstract:

The digital landscape is changing how history is being preserved. Archives are starting to publish their collections online. In doing so, they have created opportunities for the construction of innovative projects which turn their users into citizen historians. This thesis examines digital projects that archives at GLAM institutions (Galleries, Libraries, Archives, and Museums) have created that promote interactive access of their digitized collections by the general public. Special attention is paid to those initiatives that “crowdsource” information from the public. I explore how they petition users to contribute their own historical knowledge and even artifacts in order to collaboratively build a better understanding of history. This research forms the basis of my own project – a website that asks users to describe historic photographs from the collections of the Ball State University Archives. Users beta tested the website in order to determine if it would be a viable option for further development and implementation at Ball State University and other small institutions.

Acknowledgments:

I would like to thank my advisor Megan McNames for agreeing to guide me through this project. Her expertise and encouragement were of great help to me over the course of the semester.

I would also like to thank my very good friend Rachel Scott who is always ready to give me a helpful critique whenever I need it.

I am also indebted to everyone who took the time to help evaluate my final website design. Their feedback was crucial to the development of this project.

Author's Statement:

Many museums and other cultural institutions are in the midst of large initiatives to digitize their collections. It takes great effort and many hours to move so much important information into the digital space but the outcome has afforded the public wider access to historical resources than has ever been possible. These museums can now host their collections databases on their websites where the general public can engage with them online. Museums can leverage this engagement through crowdsourcing aimed at improving the richness of information within these databases. This thesis will provide a concise examination of what kind of potentials exist for making digital collections engaging resources for the public and why they are important to pursue. My project will provide an example of one such potential, including how it could be applied in practice.

Introduction

Research: Digital Archives

Archival databases provide a way for archivists to digitally catalog collection holdings by entering descriptions, provenance, accession and storage information, and subject tags. These databases are ubiquitous now and are used by both large museums and small, local institutions. The databases are helpful to both archival staff and researchers and, because they are made available online, provide greater access to materials than ever before. They extend the institution's reach to researchers and learners who would have never been able to make the trip to the physical location to view the actual collections materials. However, for many institutions creating a digital database is where the digital endeavor stops. But there is a lot more potential to be tapped in these digital archives.

Some institutions take advantage of the reach afforded by their databases and take an extra step, integrating their digitized materials into projects that engage the public as part of their effort to develop new ways to connect with patrons. Museums thrive on visitorship and archives aren't just static collections – they are meant to be utilized. In order to tap audience interest, "Research groups and leading museums are exploring focused methods that use technology to create greater connections with visitors" (Johnson, Adams Becker, Estrada, & Freeman, 2015). Reaching out to visitors through digital content has opened the doors of the institution to allow a two-way discussion about art, history, and culture between the average Joe and professionals. Participation and engagement shows the audience that their voice matters. This drives continued interest and keeps museums and archives relevant and effective.

Many of the projects produced by archival institutions use crowdsourcing, which allows users to manipulate the database information, either through tagging, categorizing, or pinning. Examples of such projects are the Smithsonian Transcription Center which hosts manuscripts that users can transcribe for the archive. There is also the Citizen Archivist Dashboard through the National Archives and Records Administration that allows users to do everything from transcribe documents to identify people in old photographs. Many of these crowdsourced projects are beneficial for everyone involved; especially for the institution (if they can put up the money and time it takes to build the project). Many museums rely on volunteers to do jobs like simple cataloging and organizational work. Putting these projects online means that there is a bigger audience of potential volunteers to pull from. A bigger audience is usually a more diverse audience meaning the archives or institution can reach more people with unique knowledge that can help the overall project goal (American Alliance of Museums). However, it is worth noting that many crowdsourcing projects usually require a large and willing audience of participants – this will not always work for smaller museums or library archives.

Third party digital initiatives, often produced through a partnership with historic institutions, have created projects that connect with people on a more personal level. These allow people to upload and organize historical information that they own and that is important to them. HistoryPin is a collaborative project with Google that allows average people as well as historic institutions to pin items from their own collections onto a world map. This helps people

to put themselves within a world-wide historical context. It has become a very successful history mapping project and is very much like the Tate's ArtMaps project. There are also a number of genealogists (most of whom are amateurs) who are making great use of Pinterest in order to organize sources and conduct research. Pre-existing social sharing tools such as Pinterest and even the photo site Flickr can make archiving a very personal endeavor.

There are also a number of more robust projects under construction that take advantage of more experimental technology. These are the few virtual reality projects out there in the world that make use of archival and historic information. For example, there is a virtual recreation of Hadrian's Villa from the second century AD. There is also an ongoing project out of the Ball State University IDIA lab that is building a virtual Buffalo Bill Wild West Show. This project will link the user directly to archival sources through the in-world heads-up-display (HUD). These projects are impressive in their breadth and scope. The down side to this is that they are also time and labor intensive and not at always cost effective for one institution. Usually they are completed in conjunction with research institutes that have the labs that can accommodate the specialized work.

In an effort to better understand the current landscape for digital archiving projects I studied a number of different initiatives that have proven successful. A list of all the projects studied is as follows:

Project Title	Creator	Purpose	Central Features
Pinterest.com		A social sharing and bookmarking site.	Allows users to create pin boards arranged around themes and then pin links to outside sources and content to these boards.
ArtMaps	The Tate London Art Museum	A crowdsourced mapping project that encourages the general public to participate in the archiving process.	ArtMaps allows people to assign map locations to the artwork in the Tate's online collections. Comments and justification for the choice of location can be added to the pinned artwork.
NARA Citizen Archivist Dashboard	The National Archives and Records Administration	Allows the public access to the many crowdsourcing projects that the NARA supports.	Users can interact with content in the NARA collection by providing tags for collection items and contributing other meaningful information to the project
Art Detective	Public Catalog Foundation in collaboration with the BBC	Art Detective aims to improve knowledge of the UK's public art collection.	Art museums can start online discussions by posting public questions about an artwork in order to crowdsource answers
Tagger	Public Catalog Foundation in collaboration with the BBC	This project aims to help create a database of oil painting sin the UK by having users tag paintings.	Users are prompted to enter descriptive tags about the artworks based on who and what is in a painting
History Pin	Nominet Trust in collaboration with Google	A crowdsourced history mapping initiative that allows people and institutions to pin historic pictures to geographical locations and add comments.	Users can pin personal pictures to the world map including information about why a picture was pinned to a location – this helps provide context for historic photos
Metadata Games	The British Library	Encourage users to add descriptive tags to archival sources.	The game allows user to view a book in the collection and then tag the image with as many descriptive words as possible. It scores the contributions and users receive a total score after each round that they play.

The main theme in all these projects is that, while they bring wider awareness to archival/primary source materials, they are also learning endeavors that set out to teach the users or have the users contribute significant information to the overall project. These are crowdsourced initiatives. Crowdsourcing has become a buzzword over the past years. Jeff Howe, who coined the term, defined crowdsourcing as “the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call” (Howe, 2006). Crowdsourcing relies on the general public to voluntarily contribute their content, knowledge, and commentary in order to build something greater than the sum of its parts. It is a phenomenon that is uniquely suited to the hyper connected world of the internet.

The World Wide Web puts the population of the world within easy reach. It allows anyone to recruit everyone’s help. Crowdsourcing takes advantage of this. It is a practice that has been applied to projects that range from collaborative art pieces to enterprises that ask for funding through websites like Indiegogo and Kickstarter. This approach has also been adopted by the GLAM sector (Galleries, Libraries, Archives, and Museums) “where volunteering has a long and consolidated tradition, and unpaid work is done for a common good” (Carletti, McAuley, Price, Giannachi, & Benford, 2013). Because this is the case, museums, archives, and similar institutions are perfectly situated to take full advantage of opportunities crowdsourced initiatives supply.

These types of projects are of growing importance within the field today. Museums are increasingly finding it hard to secure reliable funding (American Alliance of Museums, 2013). With unpredictable economic support institutions, especially smaller operations which tend to rely the most on volunteers, need all the help they can get. Digital crowdsourcing can offer an easy way to recruit volunteers to get a job done while connecting with the audience and giving them a role to play in the work the museum is accomplishing. “From the institutional perspective, participatory projects have value when they satisfy the aspects of the mission. Institutions do not engage in participatory projects because they are fun or exciting but because they serve institutional goals” (Simon, 2010, p. 13). Crowdsourcing has proven that it has the potential to do just that.

In many cases GLAM sector volunteers are assigned tasks that are relatively easy and do not require specialized knowledge in order to complete. Volunteers are sometimes recruited to help add metadata to digital archiving databases. Metadata has become a crucial part of the library and archival sciences, especially in recent years, due to the proliferation of digital database systems.

“Metadata provide a user (human or machine) with a means to discover that [a] resource exists and how it may be obtained or accessed. It can cover many aspects, such as subject content, creators, publishers, quality, structure, history, access rights and restrictions, relationships to other works or appropriate audience” (Turner, 2002).

In terms of digital archives, metadata provides a lot of information about what an artefact is, including what it is, where it is from, how old it is, and what collection it belongs to. Often, this data takes the form of “tags” which are short descriptive words or phrases that label an object, document, or photograph. Within a digital database these descriptive tags are used by search engines in order to find what a user is searching for.

Because metadata is integral to online archives but fairly easy to create it has become a popular subject for crowdsourcing projects. Initiatives such as Tagger (Produced by PFC and the BBC), Metadata Games (from the British Libraries), and the Citizen Archivist Dashboard (Produced by NARA) are examples of such projects. They outsource the job to the many internet users who are willing to spend a little time adding descriptive tags to archival resources. Usually, this is the most efficient way an institution with a large collection or a small institution trying to reach volunteers can maintain an effective and accurate database.

Process

See a Need, Fill a Need:

After seeing the success and possibilities of crowdsourced initiatives headed by museums and archives I decided to try and create a project within the same vein. There is a set of objects on Ball State University’s campus that could really benefit from this type of project. Conveniently, the Bracken Library Archives and Special Collections has built a digital database to house and provide access to the historic collection. Through my work as a research assistant I was familiar with this database system, including its flaws. The search functionality within the Digital Media Repository (DMR) is not always helpful, especially when it comes to their many photo collections. It searches titles of objects, dates, and any names (creators, artists, photo subjects) that were entered with the object. Unfortunately, the available information that the search algorithm can pull from is sometimes inadequate. Very few, if any, photos, objects, and other documents have tags that could widen the pool of possible search terms. This problem can probably be attributed to limited resources and staff who would be able to add these tags. A crowdsourced tagging initiative would give the archives extra hands to work with and would go to great lengths in improving the search functionality within the DMR.

Prototyping:

I started brainstorming different systems that I could build that would help address this tagging problem within the photograph collections. I knew from the start that the Ball State Archives (as with many smaller archives) often lacks the manpower to undertake a project of this size. The workers they do have are often engaged in projects that take precedent over adding metadata into a database. It was for this reason that I decided to make use of the crowdsourcing model. Once I settled on the idea for a crowdsourced tagging project I started sketching out possible designs for a website that could accomplish this vision.

Based on my research of similar projects I came up with a list of seven basic requirements that my designs needed to adhere to. They are as follows:

Requirements:

1. Integration with the already existing Digital Media Repository (DMR)
2. The ability to crowdsource metadata from users
3. The ability for users to personalize their experience
4. Freedom for users to choose their activities
5. challenges that guide user contributions
6. Incentives for user involvement
7. Involves Meaning-making for the user so they understand/learn something about the collection

These requirements influenced what kind of features would be included in my website designs. Using them as a guide, I sketched three possible design alternatives. Each alternative took a different approach to facilitating the goal of crowdsourcing metadata tags. The first used a game approach that tracked users' tagging efforts by giving them points for their contributions. The next idea guided users through placing the photos into three different categories – Person, Place, or Thing – based on the subjects in each picture. Users would then add tags based on those categories. The third design was a simpler approach that invited users to leave tags on photos as well as leave comments that could contain personal memories that they might have of, or associate with, a particular photograph.

Once these alternatives were all sketched out it came time to decide which one would be best suited for the central goal of the project. In order to make this decision I developed a list of eight criteria with which I would evaluate the three different alternatives.

Criteria for Evaluating Alternatives:

1. Potential for learning: Users will learn something new during their interaction with the product
2. Engaging - Users should *want* to use the product and *keep* using
3. Motivation - There must be an element which makes the user want to stay engaged
4. Personal connection - The product should host an activity and/or content that users can relate to
5. User Agency - Users must feel like they are also contributing significant knowledge to the project
6. Replayability - Ideally this is a product that will encourage repeated use
7. Sufficient Challenge - the product presents a suitable challenge to users
8. Personalization - Product experience can be tailored to each user

The final design idea that was settled on was the website, entitled "Tag-Team", which would have users categorize the photos in the collections and add tags based on those categories. The idea is that in giving participants a structure in which to leave tags they will be guided to make contributions that are as accurate, and ultimately as helpful, as they can be. I

also decided to add another feature to this original design that was intended to help encourage accurate tagging while adding an element of fun to the overall project. This feature took the form of a game titled “Word Association”. In this feature, the users would be shown a photo from one of the collections and encouraged to guess which tags they think have already been associated with the image. They would be scored on how many tags they guessed correctly and would have the opportunity to add tags to the photo that they had gotten wrong, but felt applied to the picture. In this way, the game feature served as system of checks and balances that essentially allowed players to check other taggers’ work.

The next step in the design process was paper prototyping. This type of prototyping is generally simple but very important. During this step I created mock-ups of each page of the website on paper. These mock-ups included the basic design elements of each page, including content and navigation buttons and menus. These paper prototypes are exceptionally easy to take to testers and have them walk through the basic functionality of a website. In this case, I showed each page to three test subjects and had them walk through each design feature. This is a low tech way to make sure that potential users understand how to interact with the site that I wanted to create. From the testing with my paper prototypes I received feedback about what tester liked and didn’t like and what they thought was confusing about how to use the site. Through this feedback I was able to improve my design in preparation for building it digitally.

Design Implementation: <http://www.tagteam.ballstateinnovation.com>

The beta version of the Tag-Team site was constructed through the WordPress blogging platform. Using WordPress allowed for a few distinct advantages. The platform is extremely flexible and is complimented by a whole host of plugins that allow for website customization. This means that “Tag-Team” could be built online without relying on any original coding. WordPress is also widely available for little to no fee which makes it convenient, especially for small institutions. However, because of certain technical constraints of using WordPress and the limitations of plugins, some features from the original design could not be implemented. For example, the Word Association game feature became impossible to implement as originally intended. Games tend to utilize complex processes and it would require too much customization to be feasible through a simple WordPress plugin feature.

As a result of this, I was left to try and figure out another related feature that I could easily integrate into my website. A fortunate conversation with Andrea Bour, a collections information data analyst from the Cleveland Museum of Art, during the 2015 Museums and the Web conference helped to give me an idea. My solution was influenced by this discussion and inspired by another successful crowdsourced initiative in the United Kingdom titled Art Detective (<http://www.thepcf.org.uk/artdetective/>). I ended up creating a section of the site in which archivists could post photographs from the archival collections that are a bit of a mystery. Each photo is paired with a number of questions that the archival staff hopes the users can help answer. It also allows users to leave questions of their own about certain pictures that are similarly given to the crowd in the hopes that they can provide further

information. I was exceedingly interested to see what users thought of this feature and if it would prove potentially useful to the Ball State Archives.

Testing:

In the end, I stuck with creating a bare bones design. This still allowed me to make sure that the central functionality actually worked with test users. For my final product test I wanted to have users evaluate many different aspect of the website. The following is a list of key areas of evaluation that were to be tested by users:

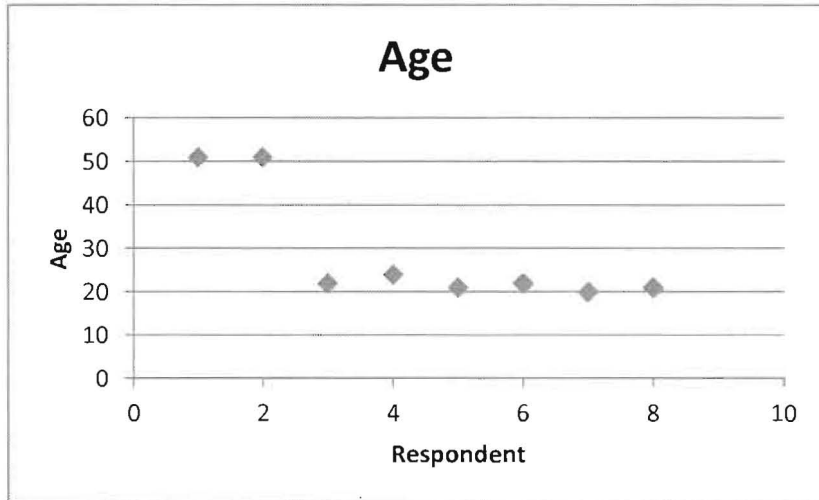
Key Inquiry Areas:

1. Ease of navigation - Do people know where they are while using the site? Can they access important menus and return to previous pages?
2. Ease of User submission – Do users understand how to submit tags to the Tag-Team site? Do they understand what kind of submissions the site is asking for?
3. Effectiveness of the Photo Sleuth feature – did users find Photo Sleuth straightforward and were they interested in interacting with it?
4. Satisfaction of user control and freedom - Can users easily explore site content and enjoy freedom of movement? Can they control their actions and the order in which they do things and can they find emergency exits if they want to leave and activity?
5. Learnability of the interface - Are labels and Icons understandable and helpful or are they confusing?
6. Satisfaction with the experience - do people find using the site a worthwhile activity?
7. Potential for learning.

From these inquiry areas I created a detailed survey that testers could use to provide feedback about the beta version of “Tag-Team” (a copy of survey can be found in the appendix). This survey was built online with the use of Google Forms. Test users were then recruited through an online post that invited them to visit the website and fill out the corresponding survey.

Tag-Team Website Evaluation Report

Testing Group Demographics:



Occupation/Major

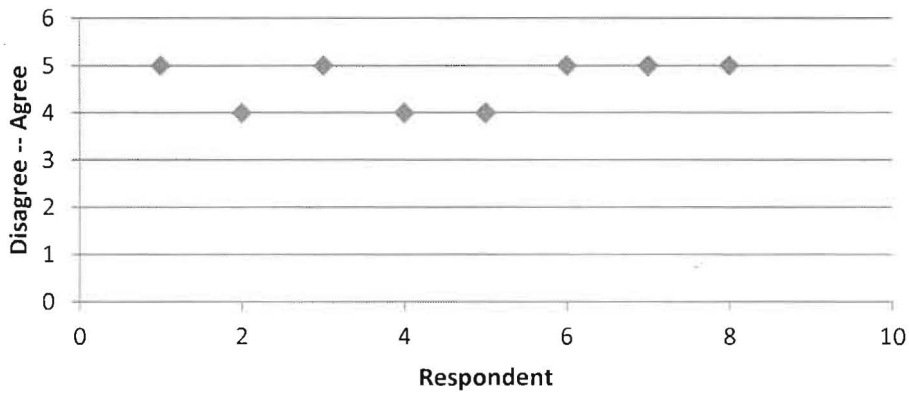
Out of the eight respondents there were three English majors, one Biology major, one Animation major, an educator, an engineer, and a data analyst.

Have you ever conducted research in an online archive before?

Three out of the eight testers responded with a "yes" while the other five responded with a "no".

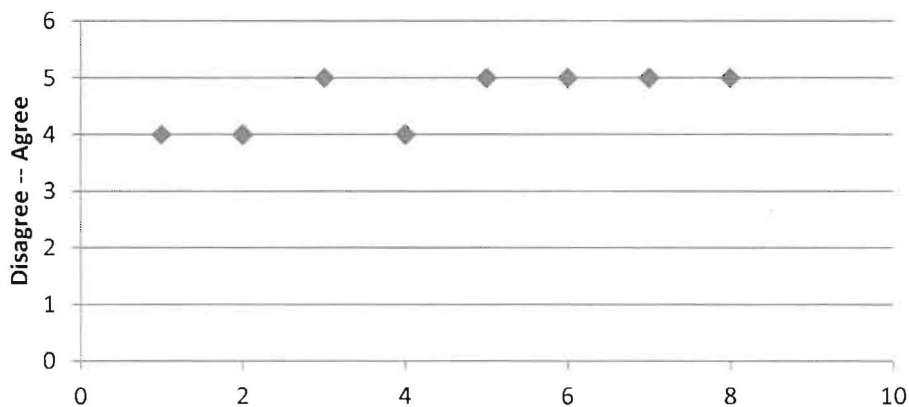
Question Module 1: Ease of navigation

It was easy to move from one section to another on the website.



Mean	4.625
Median	5
Mode	5

You know where you are at all times while using the website.



Mean	4.625
Median	5
Mode	5

Were you confused about how to navigate the site any time during your experience? If so, what confused you and why?

Of the testers who responded to this question, all agreed that the central navigation of the site was easy to understand.

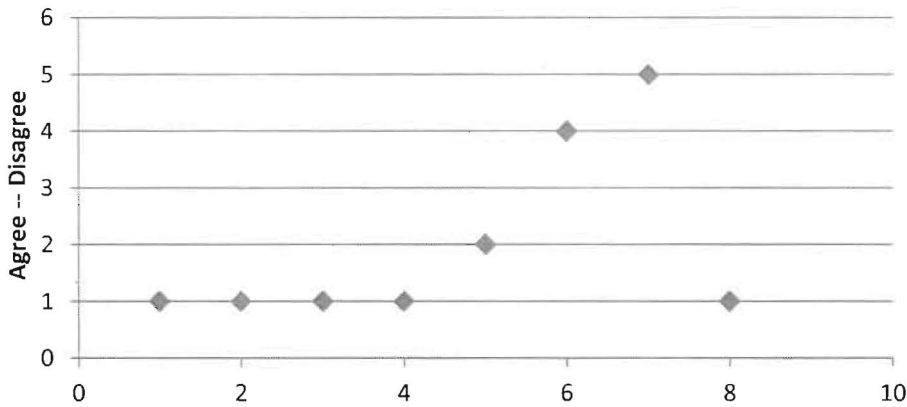
Representative Statements:

"Nope! I always knew where I was and how to get from section to section. I think a good reason for this is that the navigation bar was present across the top of the screen at all times, no matter where I was."

"I wasn't sure where to find more photos/if the photos on the home page were the only ones to be tagged"

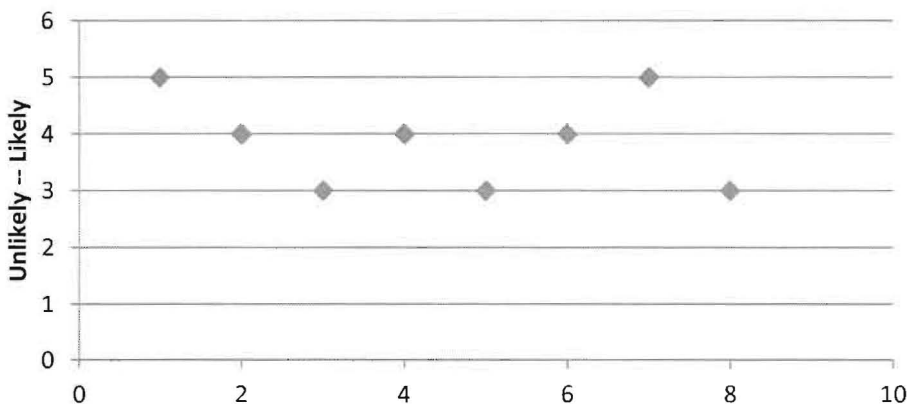
Question Module 2: Ease of user submission

Adding tags to a photo was an easy process.



Mean	2
Median	1
Mode	1

How likely are you to add tags to photos that interest you?



Mean	3.875
Median	4
Mode	4

Do you understand how to categorize (Person, Place, Thing) the photographs you looked at?

All the testers agreed that the categorization of photos made sense to them and that the process was pretty easy to follow. One tester did express that they were not entirely certain

how tags like “architecture” should be categorized, indicating that some users might have trouble choosing which category best represents the tags they wish to add.

Representative Statements:

“Yes; the directions were clear. Liked how there were examples in the box already.”

Is there anything about the tagging process that confused you? If so, what confused you and why?

Most expressed that the process was fairly straightforward though one tester did express their concern that they were not sure where the tags that were entered ended up.

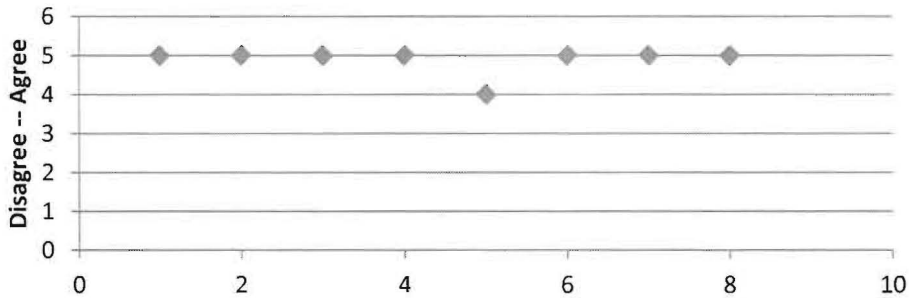
These responses correspond to the Likert scale question that asks if the user agreed that adding tags was an easy process. Most of the testers (six) responded to this question by agreeing.

Representative Statements:

“It wasn't confusing per se, but when you have the option to add your own tags, instead of having people/place/thing as click through tabs horizontally across the top, you might present them in a list. For a moment I wasn't sure where to go to submit tags - I'd just kept scrolling. It's kind of a habit on the internet nowadays, you know?”

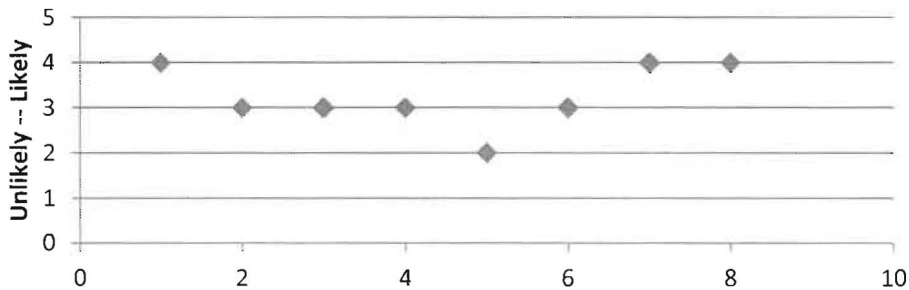
Question Module 3: Effectiveness of Photo Sleuth

The directions for Photo Sleuth are understandable.



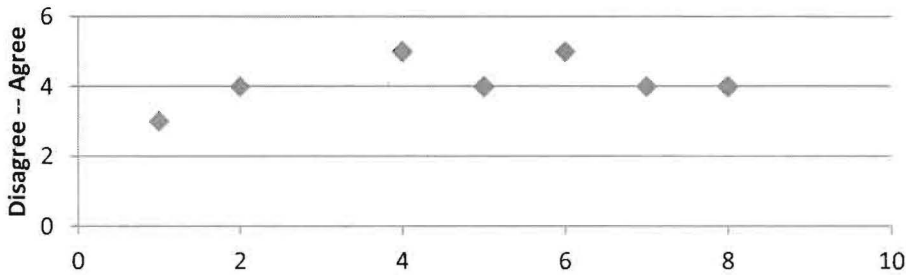
Mean	4.875
Median	5
Mode	5

How likely would you be to submit questions for photos?



Mean	3.25
Median	3
Mode	3

It is interesting to see what kinds of questions are being asked about the photos.



Mean	4
Median	4
Mode	4

Is there anything that you would change or add to the “Photo Sleuth” feature?

Of the respondents who answered this question (three did not answer at all) most had very little to add. One suggested that it might be more effective to make the questions asked more specific/detailed.

Overall, users seemed to understand what the Photo Sleuth feature was asking them to do. However, interest in interacting with the feature was kind of lack-luster. People seemed most interested in looking at what questions were posted with each picture but, as one tester noted, they were unsure if the feature would be effective in encouraging user participation beyond just a passing glance.

Representative Statements:

“I don't think so...but I'm unsure about whether the concept would work well.”

What did you like/not like about Photo Sleuth and why?

It was generally agreed that this feature was an interesting concept. A number of testers thought that trying to reach out to the crowd was a good idea to get answers to tough questions. However, Almost all acknowledged that it would be hard to find the right people who would be able to answer or even guess the answers to some questions. Testers were interested in looking at the questions but did not want to venture a guess at an answer without knowing for sure.

Representative Statements:

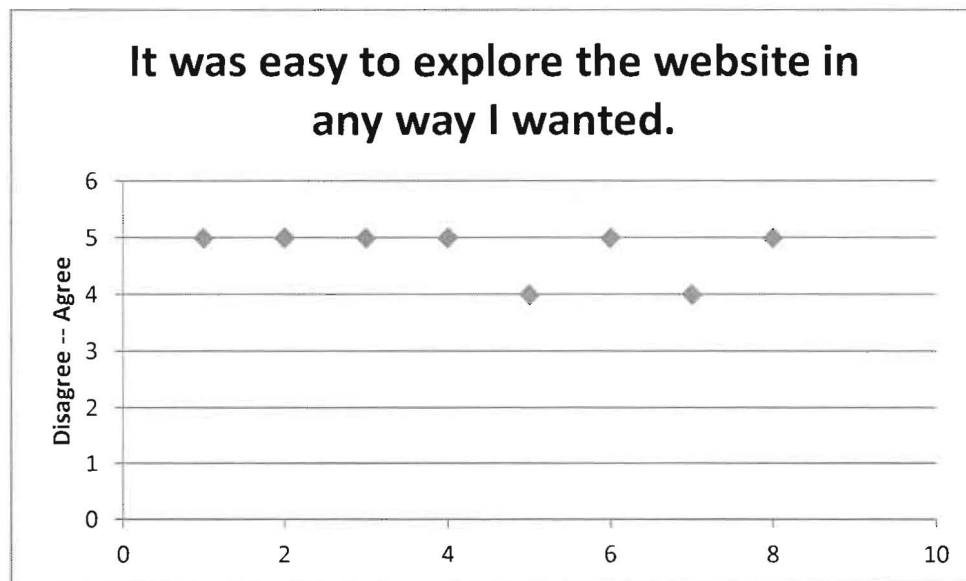
"It seems unlikely that the question answerer will know the answer(s) to the question(s), because it is difficult for there to be a question one person would not know that the next person would. Only if the next person to answer was a documentarian or an expert on the subject of the photo does it seem s/he would be able to help."

"I'm not sure how many people would know the answer to a question, but using crowd sourcing to figure out these questions is a smart idea."

"I like the concept. It seems pretty similar/redundant to the tagging system?"

"Interesting concept. Works well on mobile"

Question Module 4: Satisfaction of user control and freedom



Mean	4.75
Median	5
Mode	5

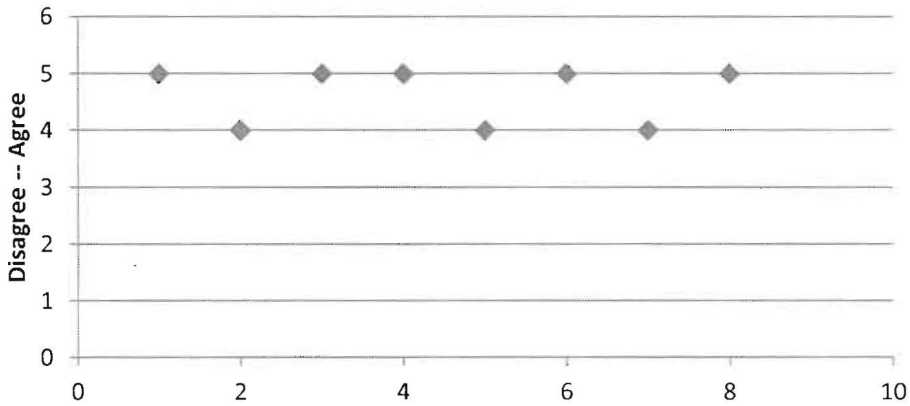
Did you get stuck at any point while using the site? If so, why did this problem occur?

All responders answered in the negative saying that they did not get stuck while using the website. This indicates that it was fairly easy for all users to move around and navigate throughout the site.

The response to the ranking question also supports this by showing that testers agreed that use of the site was pretty flexible.

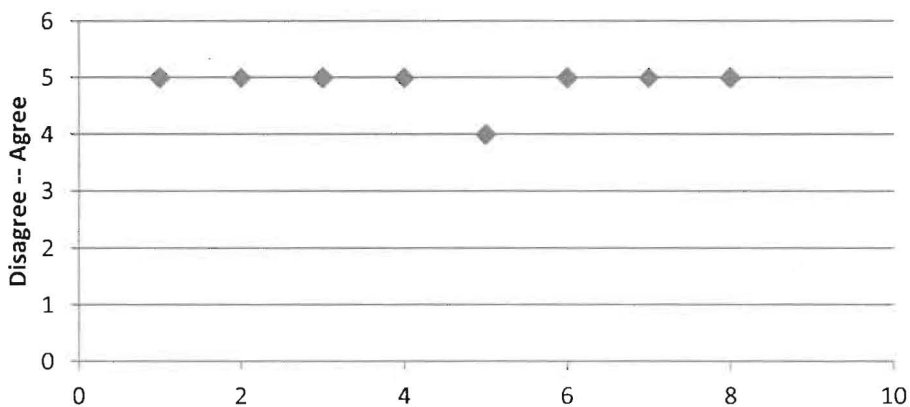
Question Module 5: Learnability of the interface

Learning how to interact with the website was easy to do.



Mean	4.85
Median	5
Mode	5

Icons and labels used in the website were understandable.



Mean	4.85
Median	5
Mode	5

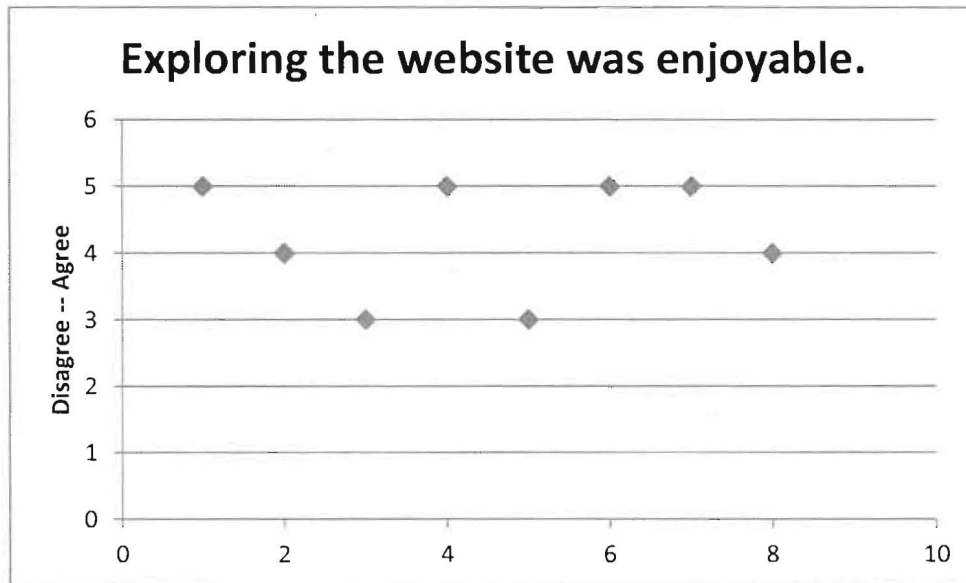
Were there any icons or labels you were confused about? What were they?

The answers to the scale questions indicate that testers thought that the site was easy to understand. The testers who left comments said that they were generally not confused by any of the labels or icons on the site. One Responder did say:

"I'm not 100% sure what creating a profile will do for me or if it's important that I have a profile"

This response is understandable given that the profile portion of the site is the least developed part of the site.

Question Module 6: Satisfaction with the experience



Mean	4.25
Median	4.5
Mode	5

Which part of the website did you like interacting with the most?

- ☒ A) The tagging
☐ B) The game

All testers responded that they preferred interacting with the tagging portion of the Tag-Team website. This, along with the answers from the test section asking about the Photo Sleuth feature suggest that users were not really attracted to that portion of the site.

As a whole, what did you like most about your experience using the website?

Representative Statements:

"Actually going through some of the old pictures. There's some cool photos there."

"I like the way the actions of tagging and sleuthing allow the user to feel like an explorer in history. I enjoyed tagging more, however, because it seemed more effective and was easier to do."

"I liked the overall idea behind it. I have not seen a website that has the same goals."

"I liked the fact that I was helping Archives solve problems. It made me feel like I was making a difference."

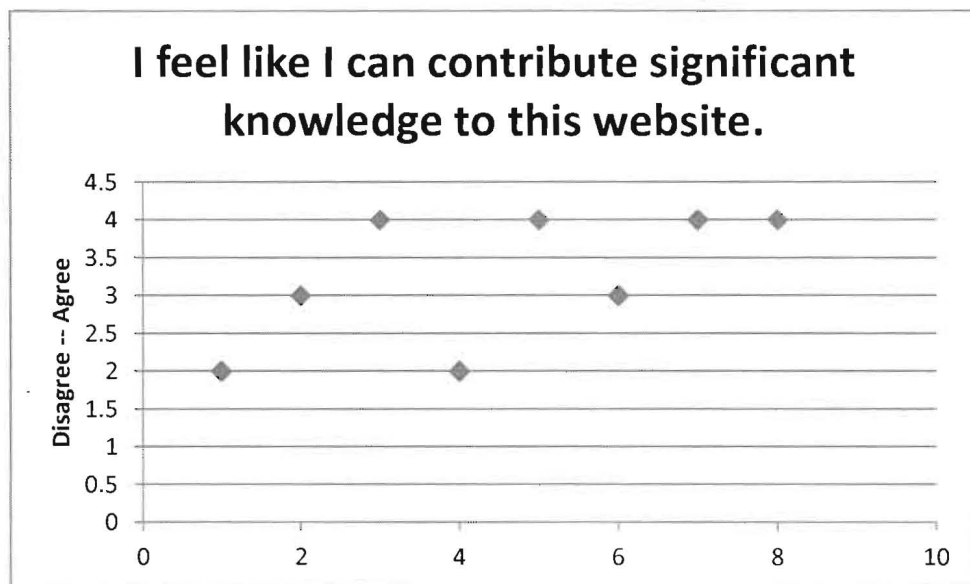
Is there anything that you would change about the Tag-Team website?

The testers who answered this question mostly focused on the desing of the site. As it stands, the design is very basic and not customized. Most people suggested adding more colors and making it look more dynamic and original.

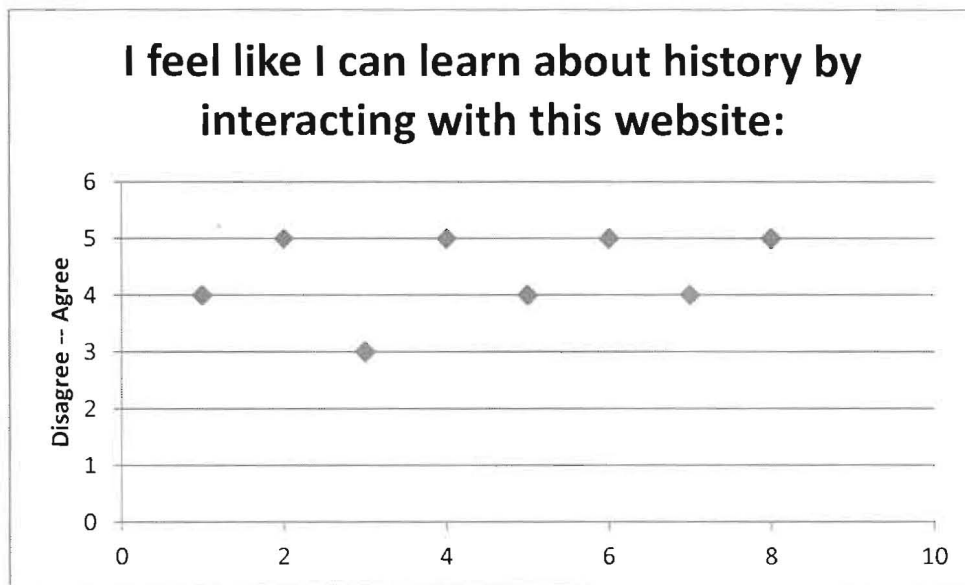
Representative Statements:

"I would give it a bit more character: add a few colors, change the font to look less generic, and add a logo. Basically only design things!"

Question Module 7: Potential for learning



Mean	3.25
Median	3.5
Mode	4



Mean	4.375
Median	4.5
Mode	5

How did interacting with this website help you understand the importance of tagging photos in a database?

Most testers agreed that using Tag-Team was a learning experience. Many expressed that they had not realized what function tagging has in a database system and how it is actually applied. They also didn't realize that most of the time this process takes a person (or many people) to go in and add tags by hand. Once they realized this they agreed that taking this task and crowdsourcing the tags seemed a good way to get the job done.

Representative Statements:

"It helped me realize that photos are useless unless they can be found and identified. I think many do not realize that that identification is a process that a real person needs to make possible by inputting information."

"I didn't realize how much databases depended on tagging. Getting as many people as possible involved will speed up the process. Very neat concept!"

Summary of Findings

Strengths:

Based on tester evaluation the Tag-team site's best strengths are in its simplicity. The website is easy to navigate and contains understandable labels and icons. It is organized in a way that allows users flexibility of movement that allows them to move from one section or task without feeling like they are trapped in a certain section. Testers indicated that they really liked looking at the kinds of pictures that were posted. This suggests that having interesting content might be the best way to get users to become engaged.

The following are a few reactions from testers when asked what they liked the most about the Tag-Team website:

"Actually going through some of the old pictures. There's some cool photos there."

"I like the way the actions of tagging and sleuthing allow the user to feel like an explorer in history. I enjoyed tagging more, however, because it seemed more effective and was easier to do."

"I liked the overall idea behind it. I have not seen a website that has the same goals."

Weaknesses:

Photo Sleuth seems like the weakest link in the chain when it comes to this website. Admittedly, this feature was the most experimental part of the site. People seemed vaguely interested in what it had to offer but did not seem to really interact with it in the way it was intended. One evaluator left this explanation: "It seems unlikely that the question answerer will know the answer(s) to the question(s), because it is difficult for there to be a question one person would not know that the next person would. Only if the next person to answer was a documentarian or an expert on the subject of the photo does it seem s/he would be able to help."

This is not to say that this kind approach couldn't be useful. This just indicates that this feature might not be appropriate for the kind of audience that the Ball State Archives can reach. This should be taken into account before this feature is developed any further.

Threats:

One of the threats to the success of Tag-Team seems to lie in the tagging process itself. Most testers responded that they understood the categorization and tagging process. However, at least one commented on how it was sometimes hard to tell what tags belonged in which category by saying "I wasn't sure where to add a tag for "architecture." This indicates that user's subjective interpretation of those categories might throw off proper tagging. Because of this, other categories (such as "Events", or "Buildings") might need to be considered in order for the process to be as comprehensive as possible.

Opportunities:

Tag-Team seems to have great potential as a teaching and learning tool that can bring awareness about the process of archiving in the digital world. The evaluation results suggest that this site made users realize what goes in to organizing large quantities of historic resources so that they will continue to be useful. Most testers shared the belief that this type of crowdsourcing initiative seemed like a creative and novel way of accomplishing the goal of accumulating useful metadata information.

One tester commented: "I didn't realize how much databases depended on tagging. Getting as many people as possible involved will speed up the process. Very neat concept!"

When asked if they felt like they could learn about history through using the website the responses were generally positive, indicating that there is an opportunity for this site to become an effective teaching tool, either in a classroom setting or with a single researcher.

There is also the opportunity for increased engagement between archives and institutions and their patrons. One evaluator replied "I liked the fact that I was helping Archives solve problems. It made me feel like I was making a difference." This kind of reaction is ideal as it shows that at least some users enjoy feeling like they are contributing in their own unique way.

In Summary:

During this project I set out to conduct an exploration of the emerging field of digital archives and collections. As part of this process I studied a number of projects that are coming to define the museum world's new approach to audience engagement. Their goals are to connect with people and to connect those people with history and culture. They give them the power to become active participants in preserving and studying cultural heritage. All the while, they are also able to help the institutions themselves through their volunteer efforts.

The seven digital initiatives that I studied served as the inspiration for my own. I took what I learned from other institutions and experimented with applying it to the Ball State Digital Media Repository. I built the Tag-Team website with the goals of raising awareness for the archive itself as well as to engage users in the task of making the archive more usable to researchers. For the purposes of this project the focus was on the photograph collections and their lack of searchable tags.

Tag-Team served as a proof of concept to see if this kind of project could be built easily and cheaply. The construction of the website was completed through WordPress which is accessible and usable by anyone. The beta version of site required no unique computer science skills to complete. It was also finished without spending a large sum of money except for the minimal amount used to secure a URL and a hosting subscription. The fact that a crowdsourcing site like this can be relatively easy to construct is promising for smaller institutions with limited resources. It means that they don't have to be left out of the new digital landscape.

The true test of my concept came when it was time to evaluate the website to gauge whether it was usable and effective. The tester response was generally positive and indicated that not only was the site usable but that people understood the central goal. In understanding the goal to tag historic photographs the users came to understand a bit more about the archiving process. They also agreed that using crowdsourcing to generate metadata content seemed to be an idea that made a lot of sense.

The overall result of this project was very promising. There would only be a few things that I would go back and change if I could. It would have been beneficial to have spent more time sketching and testing ideas before having to build one online. This would have helped to work out some kinks that had to be ironed out on the fly. The technical limitations of WordPress also made a few things difficult to implement in the restricted time available. It also proved difficult to recruit test users. While the eight responses I did get were good and gave a clear picture of how the site was received, it would have been useful to record more opinions. The aesthetic design of the site would have also received an upgrade had there been time to do so.

Tag-Team shows potential as an archival crowdsourcing tool. If developed farther and fully implemented it could be used by the archives to accomplish a crucial task. There is plenty of room in Tag-Team for expansion. Archival staff could add other collections to the project outside of just photos. They could organize tagging projects around specific collections. They could use the site to reach out to the local community to help answer questions about photographs or documents they can't identify. This website offers a lot of flexibility and a lot of opportunity for advancing engagement and productivity for the Ball State Archives as well as any other small institution who would benefit from such a project.

References

- American Alliance of Museums. (2013). American museums reflect slow economic recovery in 2012. *Annual Condition of Museums and the Economy (April 2013)*. 1-11.
- American Alliance of Museums. (n.d.). Museum Facts. Retrieved April 22, 2015, from <http://www.aam-us.org/about-museums/museum-facts>
- Bolick, C. M. (2006). "Digital Archives: Democratizing the Doing of History." *International Journal of Social Education*. 122-134. Accessed on February 4, 2012. <http://eric.ed.gov/PDFS/EJ782136.pdf>.
- Clough, G. Wayne. *Best of Both Worlds: Museums, Libraries, and Archives in a Digital Age*. Washington, DC: Smithsonian Institution, 2013.
- Carletti, L., McAuley, D., Price, D., Giannachi, G., and Benford, S. (2013) Digital Humanities and Crowdsourcing: An Exploration. In *Museums and the Web 2013*, N. Proctor & R. Cherry (eds). Silver Spring, MD: Museums and the Web. Accessed February 9, 2015 . <http://mw2013.museumsandtheweb.com/paper/digital-humanities-and-crowdsourcing-an-exploration-4/>
- "Helping History." Helping History. December 3, 2014. Accessed February 10, 2015. <http://helpinghistory.com/>.
- Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. (2015). *NMC Horizon Report: 2015 Museum Edition*. Austin, Texas: The New Media Consortium.
- Ridge, Mia. "Digital Participation, Engagement and Crowdsourcing in Museums." London Museums Group. August 15, 2013. Accessed January 20, 2015. <http://www.londonmuseumsgroup.org/2013/08/15/digital-participation-engagement-and-crowdsourcing-in-museums/>.
- Simon, N. (2010). *The participatory museum*. Santa Cruz, California: Museum 2.0.
- Turner, T. (2002). What is Metadata? *Kaleidoscope*, 10(7), 1-8. Retrieved April 1, 2015, from <https://www.library.cornell.edu/staffweb/kaleidoscope/volume10/feb02.pdf>
- Zastrow, J. (2014). "The Digital Archivist. Crowdsourcing Cultural Heritage: 'Citizen Archivists' for the Future." *Computers in Libraries* 34(8), 21.

Logo

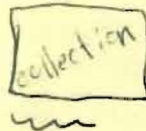
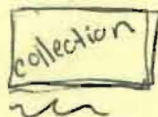
About Logtips 8

Welcome to Name?

Search Collection

Explainer Text

Current Projects:



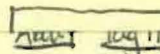
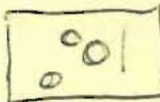
Play Game

Logo

About Logtips

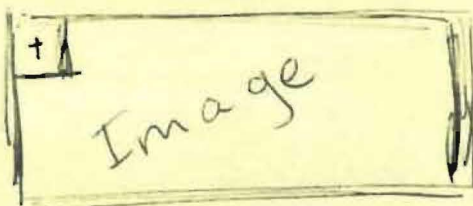
Project

sort By: Person Place Thing



Logtips

Logo



Submit

About Logtips

Meta Person Place Thing

Name

Date

Location

file

Recent

Recent

Recent

unlock Game

ReCollection

About

Log Out

Search the collection

GO

Current Projects

collection

collection

collection

←→+

Thru

F

B

Visual

meta data

User Submission
Field

Other memories
↓
Scroll to
see more

User Profile

▼ A

Activity

100 100

100

100

>

Favorites

100 100

100

100

>

My memories

↓

Is _____ image a

Person
Place
Thing

?

→ Tell us about the Person (Place, Thing).

Person
M/F
wearing
young/old
Activity

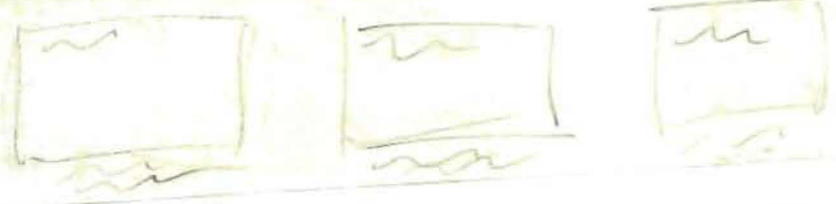
Place
where?
what's there?
out/in?
?

Thing
what
Purpose
Material
?

Homepage About Login

Welcome to PPT! Pick a mission & help us sort the Images!

Current Missions



Pass →
Fave ♥

+

F
B

Pick the category that Best fits!

Person
Place
Thing

Meta data

What is the incentive?

Extra game
Play the game both ways

Too many Hoop

Ask the right Questions
to guide user to
get submissions

Don't Break
the chain
game

Tag! You're It!

meat Tag: in Post + ch
Current challenges

collection

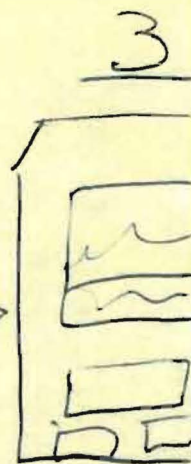
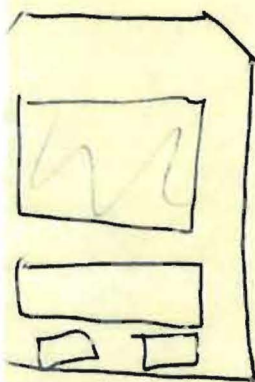
collection

collection

Current Activity



game play pg



Every one
You submit
gives you
Points

?
(Post - Pnts)
Save + leave
a challenge

Your Answer
will

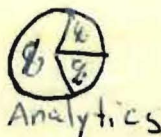
Profile pg.

Challenges in Progress



My stats

Score
(Recent)



Best subjects/
Most used tags

Home

LOGO About Tagging Tips B

Welcome To Tag-Team

Explainer Text ~~~~~

Current Projects: Search... GO

collection collection collection

Unlock Games:

Level 1 Level 2 level 3

Search

next page
previous

LOGO B

Collection Title

Sort By: Person Place Thing

GO title ~~~~~

1 GO title ~~~~~

GO title ~~~~~

Profile

LOGO B

Name's Profile

Activity:

Recent Recent Recent >

Play Games:

Level Level Level

Guessing Game

LOGO B

Game level 1

Category:
Place

Enter Guess Submit

Guess ✓ Guess X Guess ✓
Guess ✓ Guess ✓ Guess X
w/c

NAME: Tag-Team

DATE:

PAGE:

OTHER:

NOTES:

scribble.com

#

LOGO

About

Tagging Tips

→

+

F

♥

B

Meta

Tag Person

Tag Place

Tag Thing

Submit

Name

Date

Collection

LOGO

→

+

F

♥

B

Meta

Tag Person

Tag Place

Tag Thing

Submit

Is there a Person

o yes

o NO

Enter, Tags, Here

Submit

Tag

Tag

LOGO

LOGO

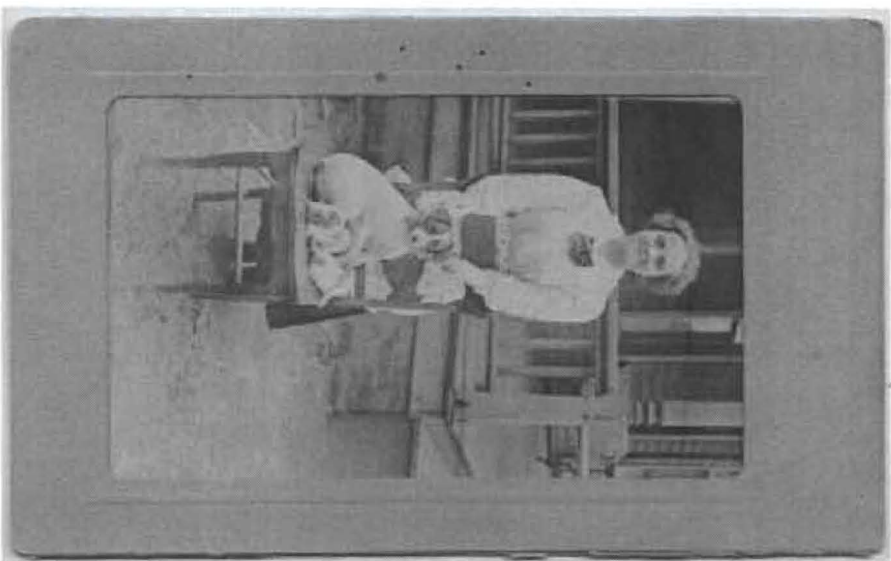
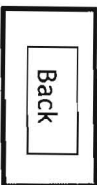
PROJECT

DATE

NAME

AUTHOR

NOTES



Description	Tag: Person	Tag: Place	Tag: Thing
-------------	-------------	------------	------------



Title Undentified woman with dog and puppies, possibly Marsh and Ryan family member

Original Date circa 1880-1910

Subject - 1GM Portraits

Women

Dogs

Puppies

Geographic Location

Muncie

Delaware County

Indiana

United States

North and Central America

Time Period

1880s (1880-1889)

Nineteenth century, C. E.

1900s (1900-1909)

1910s (1910-1919)

Twentieth century, C. E.

Description	Tag: Person	Tag: Place	Tag: Thing
-------------	-------------	------------	------------

Submit Image

Is there a person/people in this picture? ☐ Yes ☐ No

Tell us about the person/people in this picture by adding tags:

Young, Old, Activity

Submit

Description	Tag: Person	Tag: Place	Tag: Thing
-------------	-------------	------------	------------

Submit Image

Is this a picture of a place?

☐ Yes ☐ No

Tell us about the place in this picture by adding tags:

Outdoors, indoors

Submit

Description	Tag: Person	Tag: Place	Tag: Thing
-------------	-------------	------------	------------

Submit Image

Is this a picture of a thing?

☐ Yes

☐ No

Tell us about the place in this picture by adding tags:

Outdoors, indoors

Submit

Welcome to the Tag-Team Guessing Game!

Instructions:

A partial image from a collection will be shown with a category and a date of origin. Enter descriptive words (tags) that you think might be associated with the image to guess what it is.

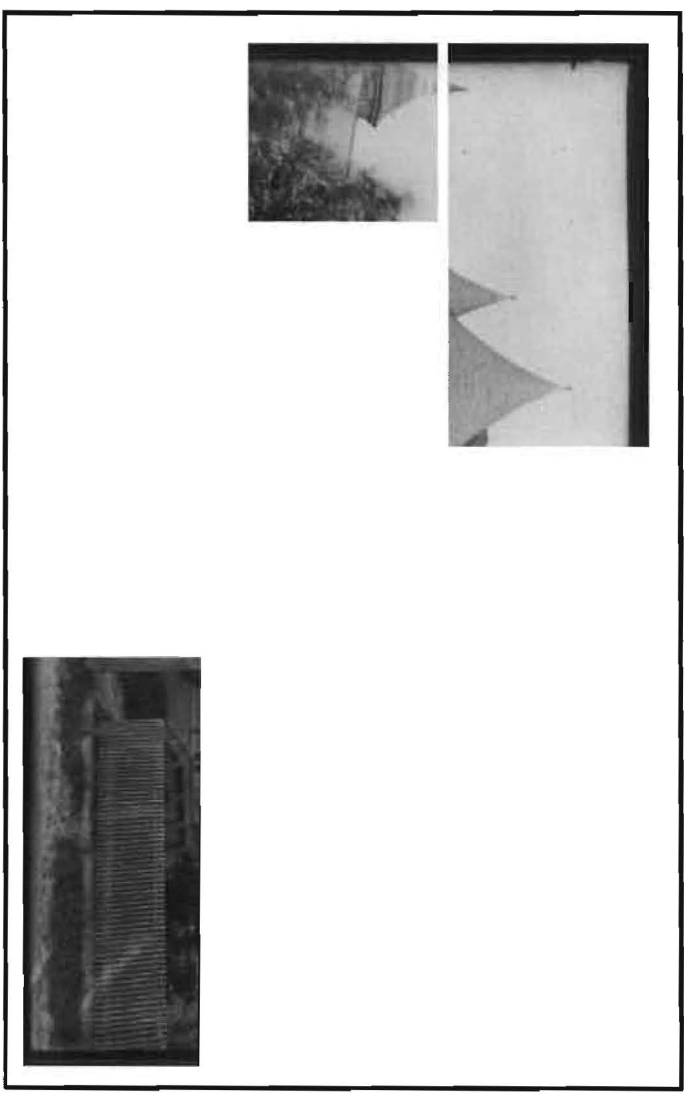
You will be scored on how many of your guesses are correct.

Level 1: Players are allowed 6 guesses



Guessing Game

Category: Place



Enter Guesses Here

Submit

Category: Place

John Weller Ryan second home



End Game! Score: ___ out of 6

<input type="text"/>	✓	<input type="text"/>	✗	<input type="text"/>	✓
----------------------	---	----------------------	---	----------------------	---

○	<input type="text"/>	✗	<input type="text"/>	✓	<input type="text"/>	✓
---	----------------------	---	----------------------	---	----------------------	---

Do you think one of the incorrect guesses should actually be a tag for this image? Check the circles in order to add the tag to our database.

Tag-Team

A Crowdsourced Tagging Mission

[Home](#) [About](#) [Tagging Tips](#) [Collections](#) [Game Center](#) [Profile](#) [Register](#)



John Weller Ryan Second Home



John Weller Ryan Second Home

by Eebretz on March 31, 2015 in All Collections, Marsh and Ryan Family Collection

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)



Cast of Welcome

by Eebretz on March 30, 2015 in All Collections, Otto Sellers Photographs

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)



Reducing Valve

by Eebretz on March 30, 2015 in All Collections, Otto Sellers Photographs

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)



Generators

by Eebretz on March 30, 2015 in All Collections, Otto Sellers Photographs

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)



A. L. Kitselman house

by Eebretz on March 30, 2015 in All Collections, W. A. Swift Photographs

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)



Albany, IN ?

by Eebretz on March 30, 2015 in All Collections, W. A. Swift Photographs

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)



Courthouse and adjacent street

by Eebretz on March 30, 2015 in All Collections, W. A. Swift Photographs

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)



Ryan and Marsh family members

by Eebretz on March 29, 2015 in All Collections, Marsh and Ryan Family Collection

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)



Walloon Lake picnic

by Eebretz on March 29, 2015 in All Collections, Marsh and Ryan Family Collection

[Edit](#)

[Continue Reading](#) • [Comments \(0\)](#)

Tag-Team

A Crowdsourced Tagging Mission

[Home](#) [About](#) [Tagging Tips](#) [Collections](#) [Game Center](#) [Profile](#) [Register](#)



About

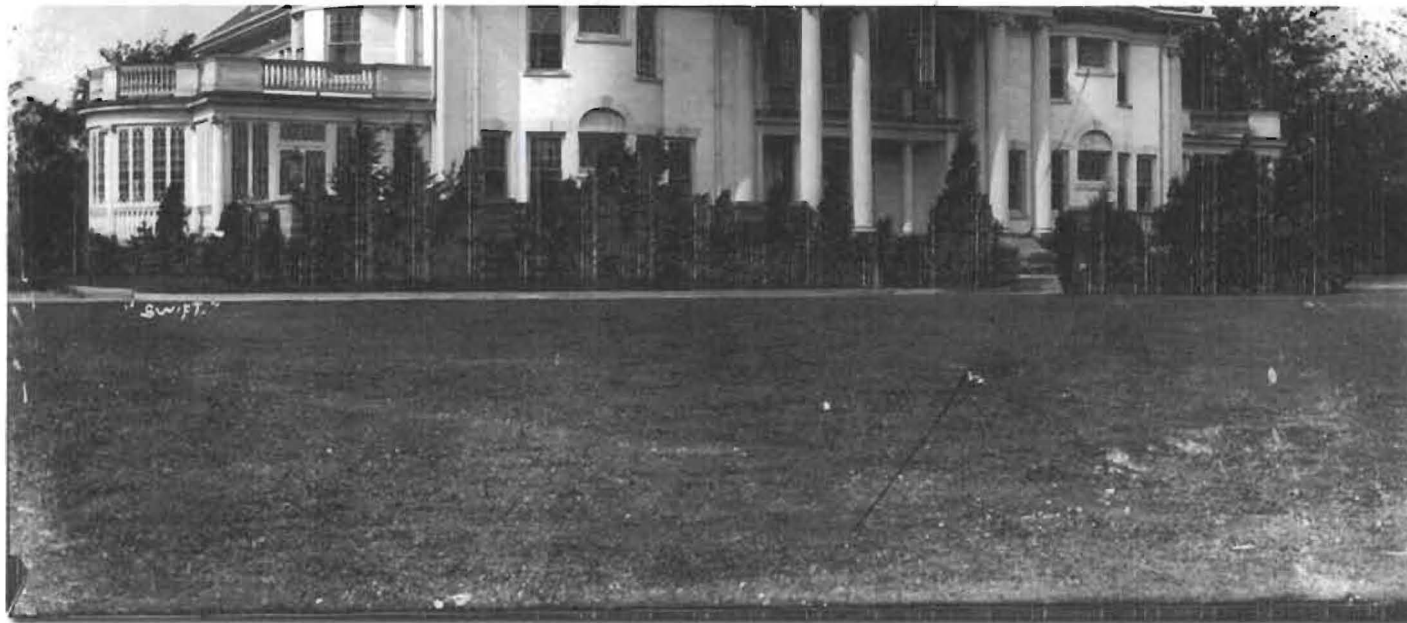
Tag-Team is a crowd-sourcing tagging mission. In Tag-Team you will find collections of historic photographs digitized from Ball State University's Archives and Special Collections.

We ask you to take part in tagging these photographs so that they may be more easily researched.

As with many websites such as Twitter, Instagram, Tumblr and so on, adding tags to a post or tweet can help categorize your content.

The same idea applies here. Some of the historic photos in the collections found in Tag-Team already have a few tags- things such as house, family, boy, girl. These tags help people who search the picture database to find photos that apply to their search terms. Unfortunately, if photos are not tagged well then they cannot be searched very well, if at all.

This is where you come in. Adding your own tags to these pictures will make the database more accurate and searching more efficient.



© Copyright 2006, Ball State University. All Rights Reserved.

Description Tag: Person Tag: Place Tag: Thing

Date: 1923

Subject: Houses, 1000 University Ave.

Tag-Team User Evaluation Survey

About this survey:

During the course of this survey tester will be directed complete a series of tasks within the Tag-Team website, such as exploring the site and submitting content. This survey will ask users to evaluate the design and usability of the website. Please complete the tasks and the questions to the best of your ability.

Key Inquiry Areas:

1. Ease of navigation - Do people know where they are while using the site? Can they access important menus and return to previous pages?
2. Ease of User submission – Do users understand how to submit tags to the Tag-Team site? Do they understand what kind of submissions the site is asking for?
3. Ease of interacting with the Photo Sleuth feature – did users find Photo Sleuth interesting and straightforward?
4. Satisfaction of user control and freedom - Can users easily explore site content and enjoy freedom of movement? Can they control their actions and the order in which they do things and can they find emergency exits if they want to leave and activity?
5. Learnability of the interface - Are labels and Icons understandable and helpful or are they confusing?
6. Satisfaction with the experience - do people find using the site a worthwhile activity?
7. Potential for learning.

Pre- Test Questions:

- 1.Age
- 3.Occupation/Major
4. Have you ever conducted research in an online archive before?

Question Module 1: Ease of navigation

Task: Explore the website.

It was easy to move from one section to another on the website.

Disagree 1 2 3 4 5 Agree

You know where you are at all times while using the website.

Disagree 1 2 3 4 5 Agree

Were you confused about how to navigate the site any time during your experience? If so, what confused you and why?

Question Module 2: Ease of user submission

Task: Choose an image from a collection and add tags to it.

Adding tags to a photo was an easy process.

Disagree 1 2 3 4 5 Agree

How likely are you to add tags to photos that interest you?

Not Likely 1 2 3 4 5 Very Likely

Do you understand how to categorize (Person, Place, Thing) the photographs you looked at?

Is there anything about the tagging process that confused you? If so, what confused you and why?

Question Module 3: Ease of interacting with the Photo Sleuth

Task: Play the Word Association game on the Tag-Team site.

The directions for Photo Sleuth are understandable.

Disagree 1 2 3 4 5 Agree

How likely would you be to submit questions for photos?

Not Likely 1 2 3 4 5 Very Likely

It is interesting to see what kinds of questions are being asked about the photos.

What did you like/not like about Photo Sleuth and why?

Question Module 4: Satisfaction of user control and freedom

It was easy to explore the website in any way I wanted.

Disagree 1 2 3 4 5 Agree

I did not feel trapped while using the website.

Disagree 1 2 3 4 5 Agree

Did you get stuck at any point while using the site? If so, why did this problem occur?

Question Module 5: Learnability of the interface

Learning how to interact with the website was easy to do.

Disagree 1 2 3 4 5 Agree

Icons and labels used in the website were understandable.

Disagree 1 2 3 4 5 Agree

Were there any icons or labels you were confused about? What were they?

Question Module 6: Satisfaction with the experience

Exploring the website was enjoyable.

Disagree 1 2 3 4 5 Agree

Which part of the website did you like interacting with the most?

A) The tagging

B) The game

As a whole, what did you like most about your experience using the website?

Is there anything that you would change about the Tag-Team website?

Question Module 7: Potential for learning

I feel like I can contribute significant knowledge to this website.

Disagree 1 2 3 4 5 Agree

I feel like I can learn about history by interacting with this website:

Disagree 1 2 3 4 5 Agree

How did interacting with this website help you understand the importance of tagging photos in a database?

Timestamp	Age	Occupation/Major	Conducted Archival Research?	Easy to move from one section to another	You know where you are at all times	Confused about navigating the site during your experience? What confused you why?	Adding tags to a photo was an easy process.	How likely are you to add tags to photos that interest you?	Understand how to categorize (Person, Place, Thing) the photographs you looked at?	Anything about the tagging process that confused you? What confused you and why?	The directions for Photo Sleuth are understandable.
4/17/2015	51	Educator	Yes	5	4		1	5	I wasn't sure where to add a tag for "architecture".	Can tags be words from the description (e.g. "picnic")?	5
4/18/2015	51	Engineering	no	4	4		1	4	yes - clear		5
4/18/2015	22	English & TCOM	yes	5	5	Nope! I always knew where I was and how to get from section to section. I think a good reason for this is that	1	3	top of the box were great for knowing which thing to tag, and the instructions were straightforward.	Nope! It was easy!	5
4/19/2015	24	Data analyst	No	4	4		1	4	Yes	No	5
4/20/2015	21	Biology	Yes	4	5	I was not confused at any time. Everything is very clearly labeled.	2	3	Yes	I am not sure where the tag ended up	4
4/20/2015	22	animation major	nope	5	5	Everything was pretty self explanatory.	4	4	Yup, pretty easy to follow	It wasn't confusing per se, but when you have the option to add your own tags, instead of having	5
4/22/2015	20	English Literature	No	5	5	I wasn't sure where to find more photos/if the photos on the home page were the only ones to be tagged.	5	5	Yes	No	5
4/22/2015	21	English	No	5	5	No	1	3	Yes; the directions were clear. Liked how there were examples in the box already.	No	5
Mean				4.63	4.63		2.00	3.88			4.68
Median				5.00	5.00		1.00	4.00			5.00
Mode				5.00	5.00		1.00	4.00			5.00

Timestamp	Age	Occupation/Major	How likely would you be to submit questions for photos?	interesting to see what kinds of questions are being asked about the photos?	Is there anything that you would change or add to the "Photo Sleuth" feature?	It was easy to explore the website in any way I wanted.	Did you get stuck at any point while using the site? If so, why did this problem occur?	Learning how to interact with the website was easy to do.	Icons and labels used in the website were understandable.	Were there any icons or labels you were confused about? What were they?	Were there any icons or labels you were confused about? What were they?
4/17/2015	51	Educator	4	3		5		5	5		
4/18/2015	51	Engineering	3	4		5		4	5		
4/18/2015	22	English & TCOM	3		I don't think so... but I'm unsure about whether the concept would work well!	5	Nope	5	5	No, I don't think so.	No, I don't think so.
4/19/2015	24	Data analyst	3	5	Sleuth makes it sound a little too Nancy Drew	5	No	5	5		
4/20/2015	21	Biology	2	4	I would make some of the questions more detailed.	4	No	4	4	No	No
4/20/2015	22	animation major	3	5	nope.	5	nope.	5	5		
4/22/2015	20	English Literature	4	4	I think it's good	4	No	4	5	I'm not 100% sure what creating a profile will do for me or if it's important that I have a profile	I'm not 100% sure what creating a profile will do for me or if it's important that I have a profile
4/22/2015	21	English	4	4		5		5	5	No, everything was very clear.	No, everything was very clear.
			3.25	4.14		4.75		4.63	4.88		
			3.00	4.00		5.00		5.00	5.00		
			3.00	4.00		5.00		5.00	5.00		

Timestamp	Age	Occupation/Major	Exploring the website was enjoyable.	Which part of the website did you like interacting with the most?	As a whole, what did you like most about your experience using the website?	Is there anything that you would change about the Tag-Team website?	I feel like I can contribute significant knowledge to this website.	I feel like I can learn about history by interacting with this website.	How did interacting with this website help you understand the importance of tagging photos in a database?	What did you like/not like about Photo Sleuth and why?
4/17/2015	51	Edicator	5	Tagging	Seeing the old photographs of the Muncie area.	Add some more design elements, perhaps a few photos along with the each section (e.g. the "photo collections" page.	2	4		
4/18/2015	51	Engineering	4	Tagging			3	5	gained a better understanding of why tagging is important	
4/18/2015	22	English & TCOM	3	Tagging	I like the way the actions of tagging and sleuthing allow the user to feel like an explorer in history. I enjoyed	I would give it a bit more character, add a few colors, change the font to look less generic, and add a logo. Basically	4	3	I helped me realize that photos are useless unless they can be found and identified. I think many do not realize that this identification is a process that a real person needs to	It seems unlikely that the question answerer will know the answer(s) to the question(s), because it is difficult for them to be a question one person would not know that the next person
4/18/2015	24	Data analyst	5	Tagging	Getting to see old pictures of places around Indiana	No	2	5	It helped to see how crowd sourcing can help compile important community information	Interesting concept. Works well on mobile
4/20/2015	21	Biology	3	Tagging	I liked the overall idea behind it. I have not seen a website that has the same goals.	I personally would change the color scheme and layout, it's a tad boring.	4	4	It showed how difficult the process can be and how easy tags make searching	I like the idea that people get to ask questions to decipher what they are looking at.
4/20/2015	22	animation major	5	Tagging	Actually going through some of the old pictures. There's some cool photos there.	Nothing comes to mind	3	5	It's really hard to understand what's going on in these images without the tags or any sort of information, so public sourcing this info could be the easiest way to	I like the concept. It seems pretty similar/redundant to the tagging system?
4/22/2015	20	English Literature	5	Tagging	I thought the tagging was interesting because I got to look at old photos and try to describe them.	No	4	4	Mostly it reminded me that tagging is important for searchability, which is a useful reminder.	It wasn't necessarily a dislike, but I didn't know any of the answers at all. It's probably going to be more useful if the person answering is from the place pictured.
4/22/2015	21	English	4	Tagging	I liked the fact that I was helping Archives solve problems. It made me feel like I was making a difference.		4	5	I didn't realize how much databases depended on tagging. Getting as many people as possible involved will speed up the process. Very neat concept!	I like the concept a lot! I'm not sure how many people would know the answer to a question, but using crowd sourcing to figure out these questions is a smart idea.
			4.25	All picked A			3.25	4.38		
			4.50				3.50	4.50		
			5.00				4.00	5.00		